Kyle Mattingly

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EDUCATION

Doctor of Philosophy, Geography — May 2019 (expected)
University of Georgia, Athens, GA
Dissertation: *Impacts of atmospheric moisture transport on the Greenland Ice Sheet*

Master of Science, Geography — August 2014
University of Georgia, Athens, GA
Thesis: *Atmospheric circulation and moisture transport associated with large-scale organized convection over subtropical South America*

Bachelor of Science, Meteorology — May 2012
Western Kentucky University, Bowling Green, KY
Honors thesis: *Large, long-lived convective systems over subtropical South America and their relationships with atmospheric teleconnections*

PUBLICATIONS

Mattingly, K. S., T. L. Mote, and X. Fettweis, 2018: Atmospheric river impacts on Greenland Ice Sheet surface mass balance. *Journal of Geophysical Research: Atmospheres*, **123**(16), 8538–8560, doi:10.1029/2018JD028714.

Oliver, H., H. Luo, R. M. Castelao, G. L. van Dijken, **K. S. Mattingly**, J. J. Rosen, T. L. Mote, K. R. Arrigo, A. K. Rennermalm, M. Tedesco, and P. L. Yager, 2018: Exploring the potential impact of Greenland meltwater on stratification, photosynthetically active radiation, and primary production in the Labrador Sea. *Journal of Geophysical Research: Oceans*, **123**(4), 2570–2591, doi:10.1002/2018JC013802.

Mattingly, K. S., L. Seymour, and P. W. Miller, 2017: Estimates of extreme precipitation frequency in urban areas derived from spatially dense rain gauge observations: A case study of two urban areas in the Colorado Front Range region. *Annals of the American Association of Geographers*, **107**(6), 1499–1518, doi:10.1080/24694452.2017.1309961.

Mattingly, K. S. and T. L. Mote, 2017: Variability in warm-season atmospheric circulation and precipitation patterns over subtropical South America: relationships between the South Atlantic Convergence Zone and large-scale organized convection over the La Plata basin. *Climate Dynamics*, **48**(1), 241–263, doi:10.1007/s00382-016-3072-0.

Mattingly, K. S., C. A. Ramseyer, J. J. Rosen, T. L. Mote, and R. Muthyala, 2016: Increasing water vapor transport to the Greenland Ice Sheet revealed using self-organizing maps. *Geophysical Research Letters*, **43**, 9250–9258, doi:10.1002/2016GL070424.

Mattingly, K. S., B. D. Johnson, and A. Fischer, 2015: Characterization of atmospheric Saharan dust plumes using remote hyperspectral imagery for public health. *Papers in Applied Geography*, **1**(3), 286–293, doi:10.1080/23754931.2015.1014705.

Mattingly, K. S., J. T. McLeod, J. A. Knox, J. M. Shepherd, and T. L. Mote, 2015: A climatological assessment of Greenland blocking conditions associated with the track of Hurricane Sandy and historical North Atlantic hurricanes. *International Journal of Climatology*, **35**(5), 746–760, doi:10.1002/joc.4018.

GRANTS AND FELLOWSHIPS

NASA Earth and Space Science Fellowship (August 2016 – August 2019): $102,880

International Atmospheric Rivers Conference student travel scholarship (2016): $500

National Weather Association Meteorological Satellite Applications travel award (2012): $500

NOAA Hollings Scholarship (2010–2012): $22,500

PRESENTATIONS

Mattingly, K. S., T. L. Mote, and X. Fettweis, 2018: *Atmospheric rivers induce Greenland Ice Sheet melt through enhanced longwave and turbulent fluxes.* Abstract accepted for oral presentation at the 2018 American Geophysical Union Fall Meeting, Washington, D.C..

Ballinger, T. J., T. L. Mote, **K. S. Mattingly**, E. Hanna, A. C. Bliss, D. van As, M. Prieto, S. Gharechahi, X. Fettweis, B. Noël, P. Smeets, and M. Ribergaard, 2018: *Are transition season melt events on the Greenland Ice Sheet driven by Baffin Bay sea ice-atmosphere interactions?* Abstract accepted for poster presentation at the 2018 American Geophysical Union Fall Meeting, Washington, D.C..

Mattingly, K. S., and T. L. Mote, 2018: *Atmospheric river impacts on Greenland: A self-organizing map analysis.* Paper presented at POLAR 2018, Davos, Switzerland.

Ballinger, T. J., T. L. Mote, **K. S. Mattingly**, E. Hanna, A. C. Bliss, D. van As, M. Prieto, T. E. Cropper, M. H. Ribergaard, and J. L. Høyer, 2018: *Interconnectivity and drivers of Baffin Bay and Greenland melt/freeze onset.* Poster presented at POLAR 2018, Davos, Switzerland.

Mattingly, K. S., 2018: *Atmospheric river impacts on the surface energy budget of the Greenland Ice Sheet.* Paper presented at the 2018 Annual Meeting of the American Association of Geographers, New Orleans, LA.

Mattingly, K. S., L. Seymour, and P. W. Miller, 2018: *Estimates of extreme precipitation frequency derived from spatially dense rain gauge observations: A case study of two urban areas in the Colorado Front Range region.* Climate Specialty Group John Russell Mather Paper of the Year Presentation at the 2018 Annual Meeting of the American Association of Geographers, New Orleans, LA.

Mattingly, K. S., 2018: *Atmospheric river impacts on Greenland Ice Sheet surface mass balance.* Paper presented at the 4th Annual University of Georgia Geography Graduate Research Symposium, Athens, GA.

Mattingly, K. S., and T. L. Mote, 2017: *Atmospheric river impacts on Greenland Ice Sheet surface melt and mass balance.* Poster presented at the 2017 American Geophysical Union Fall Meeting, New Orleans, LA.

Mattingly, K. S., and T. L. Mote, 2017: *Atmospheric river impacts on the Greenland Ice Sheet.* Paper presented at the 2017 Annual Meeting of the American Association of Geographers, Boston, MA.

Mattingly, K. S., 2017: *Atmospheric river impacts on the Greenland Ice Sheet.* Paper presented at the 3rd Annual University of Georgia Geography Graduate Research Symposium, Athens, GA.

Mattingly, K. S., and T. L. Mote, 2017: *Impacts of atmospheric moisture transport on Greenland Ice Sheet melt and energy balance.* Paper presented at the 97th Annual Meeting of the American Meteorological Society, Seattle, WA.

Oliver, H., H. Luo, R. M. Castelao, G. van Dijken, **K. S. Mattingly**, J. J. Rosen, T. L. Mote, K. R. Arrigo, A. K. Rennermalm, M. Tedesco, and P. L. Yager, 2016: *Extreme surface melting of the Greenland Ice Sheet increases growth potential for light-limited phytoplankton in the Labrador Sea.* Paper presented at the 2016 American Geophysical Union Fall Meeting, San Francisco, CA.

Mote, T. L., R. M. Castelao, P. L. Yager, H. Luo, H. Oliver, **K. S. Mattingly**, J. J. Rosen, M. Tedesco, A. K. Rennermalm, S. Moustafa, K. R. Arrigo, and G. van Dijken, 2016: *From the Ice Sheet to the Sea: An interdisciplinary study of the impact of extreme melt on ocean stratification and productivity near West Greenland.* Poster presented at the 16th European Meteorological Society Annual Meeting, Trieste, Italy.

Mattingly, K. S. and T. L. Mote, 2016: *Atmospheric river impacts on the Greenland Ice Sheet.* Paper presented at the 2016 International Atmospheric Rivers Conference, Scripps Institution of Oceanography, La Jolla, CA.

Mattingly, K. S. and T. L. Mote, 2016: *Atmospheric rivers over the North Atlantic Ocean and their effects on the Greenland Ice Sheet.* Paper presented at the 2016 Annual Meeting of the American Association of Geographers, San Francisco, CA.

Oliver, H., H. Luo, **K. S. Mattingly**, J. J. Rosen, and P. L. Yager, 2016: *Modeling the sensitivity of coastal ocean primary production to extreme melting of the Greenland Ice Sheet.* Poster presented at the 2016 American Geophysical Union Ocean Sciences Meeting, New Orleans, LA.

Yager, P. L., H. Oliver, R. M. Castelao, H. Luo, **K. S. Mattingly**, J. J. Rosen, G. van Dijken, A. K. Rennermalm, M. Tedesco, and T. L. Mote, 2016: *Ice sheet meltwater impacts on coastal biological productivity – models and remote observations for southwest Greenland.* Paper presented at the 2016 Program for Arctic Regional Climate Assessment (PARCA) Workshop, NASA Goddard Space Flight Center, Greenbelt, MD.

Mattingly, K. S. and T. L. Mote, 2016: *Moisture transport regimes associated with large-scale organized convection over subtropical South America.* Paper presented at the 96th Annual Meeting of the American Meteorological Society, New Orleans, LA.

Mattingly, K. S., 2015: *Tracing the evaporative moisture sources of precipitation in subtropical South America.* Paper presented at the 1st Annual Geography Graduate Research Symposium, Athens, GA.

Mattingly, K. S., 2014: *Moisture transport regimes associated with large-scale organized convection over subtropical South America.* Paper presented at the 69th Annual Meeting of the SouthEastern Division of the American Association of Geographers, Athens, GA.

Mattingly, K. S., B. D. Johnson, and A. Fischer, 2014: *Characterization of atmospheric Saharan dust plumes using remote hyperspectral imagery for public health.* Paper presented at the 37th annual Applied Geography Conference, Atlanta, GA.

Mattingly, K. S., J. A. Knox, C. Davis, R. Hale, L. Lindsey, A. Long, R. Scroggs, J. Rackley, A. E. Stewart, L. Bloch, and J. McLeod, 2014: *Who's the King of PoP? Comparing the accuracy of NWS and NAM / GFS MOS precipitation forecasts for ten U.S. cities, 2003–2012.* Paper presented at the 94th Annual Meeting of the American Meteorological Society, Atlanta, GA.

McLeod, J. T., **K. S. Mattingly**, J. M. Shepherd, and J. A. Knox, 2014: *A climatological assessment of Greenland blocking during Hurricane Sandy and its influence on North Atlantic hurricane tracks.* Poster presented at the 94th Annual Meeting of the American Meteorological Society, Atlanta, GA.

Mattingly, K. S. and J. D. Durkee, 2012: *Large, long-lived convective systems over subtropical South America and their relationships with atmospheric teleconnections.* Poster presented at the 67th Annual Meeting of the SouthEastern Division of the American Association of Geographers, Asheville, NC.

Mattingly, K. S. and J. D. Durkee, 2012: *Characteristics of large, long-lived convective systems over subtropical South America derived from geostationary satellite imagery.* Paper presented at the 37th Annual Meeting of the National Weather Association, Madison, WI.

Mattingly, K. S. and J. D. Durkee, 2012: *Characteristics of warm-season persistent elongated convective systems in subtropical South America.* Poster presented at the 92nd Annual Meeting of the American Meteorological Society, New Orleans, LA.

Mattingly, K. S. and D. P. St. Jean, 2011: *Sounding-derived parameters associated with New England tornadoes.* Poster presented at the 2011 NOAA Education Symposium, Silver Spring, MD.

Mattingly, K. S., 2010: *Analysis of the January 3, 2000 tornado in Owensboro, KY.* Poster presented at the 2010 Kentucky Academy of Sciences annual meeting, Bowling Green, KY.

AWARDS AND HONORS

American Association of Geographers Climate Specialty Group John Russell Mather Paper of the Year Award (2018)

Honorable mention (4th place) in Climate Specialty Group student paper competition at American Association of Geographers Annual Meeting (2018)

1st place in Climate Specialty Group student paper competition at American Association of Geographers Annual Meeting (2017)

Best Presentation Award, 3rd Annual University of Georgia Geography Graduate Research Symposium (2017)

2nd place in Climate Specialty Group student paper competition at American Association of Geographers Annual Meeting (2016)

WxChallenge national forecasting competition (2015–16): Finished 21st in cumulative regular season standings (out of 1836 participants)

WxChallenge national forecasting competition (2015–16): Trophy winner for Islip, NY forecast site (2nd place in Graduate Student category)

Master's student honors paper finalist, 69th Annual Meeting of the SouthEastern Division of the American Association of Geographers (2014)

One of five students invited to give oral presentation at National Weather Association annual meeting (2012)

University of Georgia Graduate School Assistantship (2012–2014)

"Pass with distinction" highest rating on Western Kentucky University undergraduate honors thesis (2012)

2nd place in poster category at NOAA Hollings Scholar Education Symposium (2011)

3rd place in Geography poster presentation competition at Kentucky Academy of Sciences annual meeting (2010)

Western Kentucky University President's List for Fall 2008, Spring 2009, Fall 2009, Spring 2010, Fall 2010, Fall 2011, and Spring 2012 semesters

Western Kentucky University Presidential Scholarship (2008–2012)

TEACHING

GEOG 1112: Introduction to Weather and Climate (*Instructor of Record*). Department of Geography, University of Georgia (Spring 2015)

GEOG 1112L: Introduction to Weather and Climate Lab. Department of Geography, University of Georgia (Spring 2014, Fall 2014, Summer 2015, Spring 2016)

GEOG 3120L: Weather Analysis and Forecasting Lab. Department of Geography, University of Georgia (Fall 2012, Fall 2013, Fall 2014, Fall 2015, Fall 2016)

PROFESSIONAL SERVICE

Manuscript reviewer for *Nature*, *Scientific Reports*, *The Cryosphere*, *Journal of Geophysical Research: Atmospheres*, and *Physical Geography*

Judge for American Association of Geographers Climate Specialty Group John Russell Mather Paper of the Year Award (2019)

Member, Western Kentucky University Meteorology Program External Advisory Board (2018–present)

Poster competition judge, 16th Annual Geography Undergraduate Conference, University of Georgia (2015)

University of Georgia Atmospheric Sciences representative at the American Meteorological Society career fair (2014)

Graduate Student Representative to University of Georgia student chapter of the American Meteorological Society (2013–2014)

Member of University of Georgia planning committee for the 2014 American Meteorological Society annual meeting (2013–2014)

Student volunteer, Kentucky Weather Conference (2012)

Student volunteer, Tennessee Severe Weather Awareness Workshop (2012)

PROFESSIONAL AFFILIATIONS

American Geophysical Union (2017–present)

American Association of Geographers (2013–present)

SouthEastern Division of the American Association of Geographers (2013–present)

American Meteorological Society (2009–present)

MEDIA CONTRIBUTIONS

Contributor to Reuters story on Greenland melt (September 2018)

Contributed graphics to CNN story on Greenland melt (November 2017)

Interviewed for *Popular Science* story on Greenland blocking (November 2017)

Reviewer for NOAA Climate.gov summary of 2017 Greenland melt season (September 2017)

PROFESSIONAL ACTIVITIES

Teacher / Counselor, Upward Bound at Western Kentucky University (Summer 2012)

NOAA Hollings Scholarship program intern at NWS Gray, Maine (Summer 2011)

Quality Assurance Technician, Kentucky Mesonet (2009–2011)